

WHAT IS CLAIMED IS:

1. An immobilized enzyme in which (S)-hydroxynitrile lyase is immobilized in a carrier comprising a porous inorganic material.
2. The immobilized enzyme according to claim 1, wherein said carrier comprising a porous inorganic material is any of a sintered clay carrier, a silica carrier, an alumina carrier and a silica alumina carrier.
3. The immobilized enzyme according to claim 1 or claim 2, wherein said carrier comprising a porous inorganic material has a pore size of 10-80 nm.
4. The immobilized enzyme according to any one of claims 1 to 3, wherein said (S)-hydroxynitrile lyase is derived from a plant of Euphorbiaceae, Poaceae(Gramineae), or Olacaceae.
5. A method for producing an immobilized enzyme, comprising immobilizing (S)-hydroxynitrile lyase in a carrier comprising a porous inorganic material.
6. The method for producing an immobilized enzyme according to claim 5, wherein said carrier comprising a porous inorganic material is any of the sintered clay carrier, the silica carrier, the alumina carrier and the silica alumina carrier.
7. The method for producing an immobilized enzyme according to claim 5 or claim 6, wherein said carrier comprising a porous inorganic material has a pore size of 10-80 nm.
8. The method for producing an immobilized enzyme according to any one of claims 5 to 7, wherein said (S)-hydroxynitrile lyase is derived from a plant of Euphorbiaceae, Poaceae(Gramineae) or Olacaceae.
9. A method for producing optically active cyanohydrin, comprising bringing the immobilized enzyme according to any one of claims 1 to 4 into contact with a carbonyl compound and a cyanogen compound in the presence of a slightly water-soluble or water-insoluble organic solvent.
10. The method for producing an optically active cyanohydrin according to claim 9, wherein said immobilized enzyme is collected to be reused from a reaction mixture after the completion of a reaction for producing an optically active cyanohydrin.

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